

CLAIMS

What is claimed is:

1. An X-Y address type solid-state image pickup device, comprising:

a plurality of pixel regions arranged in a matrix form in regions defined by a plurality of horizontal selection lines and a plurality of vertical selection lines, wherein each pixel region including a photoelectric transducer for performing photoelectric conversion of incident light, an amplifier for converting an electric charge stored in the photoelectric transducer into image data, and a horizontal selection switch for outputting the image data to a predetermined one of vertical selection lines on the basis of a horizontal selection signal outputted to a predetermined one of horizontal selection lines; and

an image averaging circuit for carrying out an averaging processing of the image data outputted from at least two of the plurality of pixel regions.

2. An X-Y address type solid-state image pickup device according to claim 1, wherein the image averaging circuit carries out the averaging processing of the image data of the plurality of pixel regions on the predetermined one of the horizontal selection lines.

3. An X-Y address type solid-state image pickup device according to claim 1 or 2, wherein the image averaging circuit carries out the averaging processing of the image data of the

plurality of pixel regions on the predetermined one of the vertical selection lines.

4. An X-Y address type solid-state image pickup device according to claim 3, further comprising a noise cancel circuit for removing a noise superimposed on the image data,

wherein the image averaging circuit is disposed in the noise cancel circuit.

5. An X-Y address type solid-state image pickup device according to claim 4, wherein the noise cancel circuit includes, for each of the vertical selection lines, a correlated double sampling circuit in which an electric charge corresponding to the image data after removal of the noise is held in a first capacitance.

6. An X-Y address type solid-state image pickup device according to claim 5, wherein the image averaging circuit includes a first averaging processing switch for connecting a plurality of the first capacitances to average a plurality of the electric charges.

7. An X-Y address type solid-state image pickup device according to claim 6, wherein the image averaging circuit includes a second capacitance inserted in parallel with the first capacitance in the correlated double sampling circuit.

8. An X-Y address type solid-state image pickup device according to claim 7, wherein the second capacitance is the capacitance of an input side or an output side of an amplifier

provided in the correlated double sampling circuit.

9. An X-Y address type solid-state image pickup device according to claim 7, wherein the image averaging circuit includes a second averaging processing switch for electrically connecting/disconnecting the second capacitance to/from the correlated double sampling circuit.

10. An X-Y address type solid-state image pickup device according to claim 9, wherein the image averaging circuit includes a third averaging processing switch for electrically connecting/disconnecting the first capacitance to/from the correlated double sampling circuit.

11. An X-Y address type solid-state image pickup device according to claim 7, wherein the first averaging processing switches connect a plurality of the first and the second capacitances to average a plurality of the electric charges.

12. An X-Y address type solid-state image pickup device according to claim 11, wherein at least the first and the second averaging processing switches operate almost simultaneously to average the plurality of the electric charges.

13. An X-Y address type solid-state image pickup device according to claim 12, wherein the first and the second averaging processing switches include an analog switch circuit in which an n-ch MOSFET and a p-ch MOSFET are combined.

14. An X-Y address type solid-state image pickup device

according to claim 12, wherein the first and the second averaging processing switches include an analog switch circuit made of either one of an n-ch MOSFET and a p-ch MOSFET.

15. An X-Y address type solid-state image pickup device according to claim 13 or 14, further comprising switching noise cancel circuits connected to an input side and an output side of the analog switch circuit to reduce switching noises of the analog switch circuit, the circuits being made of MOSFETs in which source electrodes are short-circuited to drain electrodes.

16. An X-Y address type solid-state image pickup device according to claim 15, wherein one of the switching noise cancel circuits has an approximately half size of the analog switch circuit.